

REMARKS

This amendment is responsive to the Office Action¹ mailed on July 5, 2005. Claims 1-92 were presented for examination and were rejected. Claims 1, 32 and 63 are independent claims and are amended along with dependent claims 4, 35 and 66; no new matter is added. No claims are added or canceled. Claims 1-92 are pending.

Claim 1 is rejected under 35 U.S.C. § 112 because the word “substantially” allegedly renders the claim indefinite, allegedly because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. Applicant respectfully disagrees. The Office Action refers to MPEP § 2173.05(d) for support, but this section appears to be irrelevant to this issue since it relates to indefinite claim language that uses the expression “for example,” which claim 1 does not use. However, MPEP § 2173.05(b)D does refer to the term “substantially” and points out that in the case of *In re Mattison*, 509 F.2d 563, 184 USPQ 484 (CCPA 1975) a claim limitation incorporating “substantially equal” language would have been known to one of ordinary skill in the art in that particular instance, and was therefore not indefinite. Applicants submit that “substantially equal” and “substantially identical” are equivalent expressions, wherefore “substantially identical” is not indefinite.

However, to avoid further debate over this point and to advance the prosecution of this case, Applicants have amended claim 1 by deleting “substantially.” Since

¹ The Office Action may contain a number of statements characterizing the cited reference(s) and/or the claims which Applicants may not expressly identify herein. Regardless of whether or not any such statement is identified herein, Applicants do not automatically subscribe to, or acquiesce in, any such statement. Further, silence with regard to rejection of a dependent claim, when such claim depends, directly or indirectly, from an independent claim which Applicants deem allowable for reasons provided herein, is not acquiescence to such rejection of that dependent claim, but is recognition by Applicants that such previously lodged rejection is moot based on remarks and/or amendments presented herein relative to that independent claim.

“substantially identical” also appeared in claims 4, 32, 35, 63 and 66 Applicants have amended those claims in like manner. Support for this amendment appears in the specification as filed. *See*, for example, page 23, lines 18-19, page 24, line 14 and page 28, line 3. Also, the expressions “replicate” or “duplicate” or “maintained consistent” which appear throughout the specification (*see*, e.g., page 20, line 6) are synonymous with “identical”.

Claims 1, 3, 32, 34, 63 and 65 are rejected under 35 U.S.C. §102(e) as being anticipated by Wallach et al. (U.S. Patent No. 6,292,905, hereinafter “Wallach”). Claims 2, 4-6, 9, 33, 35-37, 40, 64, 66-68 and 71 are rejected under 35 U.S.C. §103(a) as being un-patentable over Wallach in view of Taylor (U.S. Patent No. 5,664,170, hereinafter “Taylor”). Claims 7-8, 10, 13-16, 19-22, 25-27, 38-39, 41, 44-47, 50-60, 69-70, 72, 75-78 and 81-91 are rejected under 35 U.S.C. §103(a) as being un-patentable over Wallach-Taylor as applied to claims 1, 2, 4 and further in view of Bunnell (U.S. Patent No. 6,192,405, hereinafter “Bunnell”). Claims 11-12, 17-18, 23-24, 28-31, 42-43, 48-49, 61-62, 73-74, 79-80 and 92 are rejected under 35 U.S.C. §103(a) as being un-patentable over Wallach-Taylor-Bunnell as applied to claims 1, 2, 4, 7 and 10 and further in view of Zondervan et al. (U.S. Patent No. 5,516, 327, hereinafter “Zondervan”). Applicants respectfully traverse these rejections because the applied prior art taken individually or in combination does not disclose or suggest all of the claim elements of Applicants’ independent claims, for the following reasons.

Consider, for example, claim 1. Claim 1 recites, interalia, “means for establishing a DDB in EACH of said nodes.” (Emphasis added.) Wallach does not disclose this claim element because Wallach does not disclose establishing a DDB in each of its nodes. For

example, consider Fig. 3 in Wallach which is a block diagram showing a network in accordance with its present invention. Wallach shows a DDB established in its servers 54, 56 and 58 but not in its printers 84 and 86 nor in its RAID storage devices 78, 80 and 82.

Referring to Applicants' specification, at least pages 4-5, Applicants define network nodes as software objects which send and receive messages to and from other objects. This broad definition includes, without limitation, hardware and software details, logical units (LUNs), as well as storage systems themselves (specification, page 4, lines 16-17). Thus, the printers and storage devices of Wallach fall within the definition of Applicants' claimed nodes². In other words, printers and storage devices (nodes) participating in a network in accordance with Applicants' invention would each have a DDB included therein, but Wallach's printers and storage devices do not.

The reason why Wallach does not include a DDB in each of its printer and storage nodes is because it operates entirely differently from Applicants' invention. Wallach merely backs up one server (primary server 56, Fig. 5A, Wallach) with a second server (backup server 54, Fig. 5A, Wallach) and therefore has virtually nothing to do with Applicants' invention. At best, Wallach teaches the problematical prior art described in Applicants' specification, page 6, lines 19-23.

Claim 1 also recites "means for controlling contents of each said DDB to be identical to contents of every other said DDB and in a manner to avoid a single point of failure." Wallach does not disclose or suggest this claim element either for at least two reasons. First, because Wallach does not establish a DDB in each of the nodes as

² But, the printers and storage devices of Wallach do not fall within the definition of Wallach's servers, as explained on pages 42-43, hereinbelow.

explained above, it CANNOT control contents of each “said DDB” because “said DDB” is not Wallach’s DDB. Said DDB refers to a DDB included in each and every node in Applicants’ network. In other words, Wallach does not control contents of a DDB in its printer node because it does not have a DDB in its printer node; Wallach does not control contents of a DDB in its storage node because it does not have a DDB in its storage node, etc. Wallach’s DDB is, therefore, not Applicants’ claimed DDB.

Secondly, even if Wallach included a DDB in other than its primary and backup servers, it still would not be relevant to Applicants’ claims because it does not control each DDB’s contents “in a manner to avoid a single point of failure.” Indeed, Wallach teaches away from this limitation by clearly presenting a single point of failure by disclosing a backup server to back-up a primary server. Referring to Wallach, Fig. 5A, and its relevant text, server 54 is presented as a backup server for primary server 56. Because backup server’s DDB 150B contains all of the same information which was in primary server’s DDB 150A just prior to a failure of the primary server, backup server 54 is able to successfully substitute for the primary server, PROVIDED THAT BACKUP SERVER 54 HAD NOT PREVIOUSLY FAILED PRIOR TO THE FAILURE OF PRIMARY SERVER 56! This is a good example of a single point of failure problem, which is discussed as a problem of the prior art and solved by Applicants’ present invention. If backup server 54 (the single point) had failed prior to failure of primary server 56, then Wallach’s system fails completely - at least with respect to that portion of the network associated with these two servers.

Despite these apparent deficiencies in Wallach, the Office Action, page 3, cites Wallach col. 5, lines 21-23 and col. 5, lines 32-34 to show “means for establishing a

DDB in each of said nodes.” These sections refer to a distributed database and how it is stored for availability to users connected to the network. The sections relate to partitioning the distributed database, defining a replica as a copy of a partition, and synchronizing each replica: “A change to one partition replica must be echoed to every other replica.” (col. 5, lines 33-34) Although, at first blush, this language may somehow seem relevant to Applicants’ claim element, it clearly is not because it is discussing a distributed database that is limited in its distribution to two servers - primary and backup. There is no teaching or suggestion in Wallach to distribute its DDB to its printers or storage devices. Thus, this section does not disclose or suggest: “means for establishing a DDB in each of said nodes” as recited in claim 1. Indeed, Applicants’ “each of said nodes” is inclusive of all network nodes, not only network servers. For this reason, Applicants respectfully request that the 35 U.S.C §102(e) rejection be withdrawn and the claim allowed.

The Office Action, page 3, continues with citing Wallach col. 4, lines 25-27; col. 3, lines 40-45; col. 6, lines 21-24 to show “means for controlling contents of each said DDB to be identical to contents of every other said DDB and in a manner to avoid a single point of failure.” These sections refer to replicating the network directory database “throughout all servers in the cluster” to allow “failure detection, resource/object remapping and recovery.” But, Wallach shows and describes only one backup server per primary server, representing a single point of failure for the network associated with that primary/backup server pair.

Moreover, distribution of the DDB in Wallach is limited to servers. Wallach defines its servers to be other than its storage device and its printer. For example:

“Storage device 78 and printer 84 are connected to server 54. Storage device 80 is connected to server 56. Either of workstations 66 and 68 can connect via server 54 locally to printer 84 and storage device 78. Either of workstations 66 and 68 can connect locally via server 56 to storage device 80.” (Wallach, col. 4, lines 19-24). Clearly, as shown by at least this language in Wallach, its servers are not its printers or its storage devices. Accordingly, the language “replicated throughout all servers in the cluster” (Wallach, col. 3, line 45) cannot be construed to include Wallach’s printers and storage devices, as Wallach is not referring to its printers or storage devices as servers. Indeed, Wallach is not showing or suggesting that. Wallach’s disclosure is limited to a server backup technique, backing up one server with another. One cannot backup a server with a printer. One cannot backup a server with a storage device. Accordingly, there is no need for DDB’s to be included in Wallach’s printers or storage devices and, plainly, they are not included therein.

Therefore, these sections of Wallach, taken in the context of its primary and backup server disclosure, do not teach avoidance of the single point of failure and therefore do not disclose or suggest “means for controlling contents of each said DDB to be identical to contents of every other said DDB and in a manner to avoid a single point of failure” as recited in claim 1. For this additional reason, Applicants respectfully request that the 35 U.S.C §102(e) rejection be withdrawn and the claim allowed.

Independent claims 32 and 63 are the computer program product and methodology equivalents, respectively, of claim 1 and contain similar language. These two claims are allowable for the same reasons given above with respect to claim 1.

The other cited references: Taylor, cited to show an IP addressing scheme for network communications; Bunnell, cited to show addition of network resources within a distributed directory database; and Zondervan, cited to show version numbers do not cure the above-noted deficiencies of Wallach.

Claims 2-31, dependent, directly or indirectly, from allowable claim 1 are also allowable at least for reasons based on their dependency from an allowable base claim.


Claims 33-62, dependent, directly or indirectly, from allowable claim 32 are also allowable at least for reasons based on their dependency from an allowable base claim.

Claims 64-92, dependent, directly or indirectly, from allowable claim 63 are also allowable at least for reasons based on their dependency from an allowable base claim.

CONCLUSION

Reconsideration and allowance of claim 1-92 are respectfully requested. To the extent that an extension of time may be needed in order to enter this amendment in this case, please consider this response as including a petition under 37 C.F.R. § 1.136 for such extension of time. Please charge any fee for such petition or any other fee or cost that may be incurred by way of this amendment to Patent Office deposit account number 05-0889. If the Examiner feels that a telephone conversation may serve to advance the prosecution of this application, he or she is invited to telephone Applicants' undersigned representative at the telephone number provided below.

Respectfully submitted,



JOEL WALL

Registration No. 25,648

TELEPHONE:
JOEL WALL ESQ.
508-625-1323
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